

On the Effectiveness of eWOM Communications: the Moderating Effect of Consumers' Prior Experience*

Full Paper

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Abstract

Electronic word of mouth communications (eWOMs) are online consumer-generated communications that are expected to affect consumers' perceptions of adopting online services. While adoption of an online service consists of pre and post-usage stages, much of literature implicitly assumes that the effectiveness of positive/negative eWOM is the same across the two stages. In this paper, we draw on the accessibility-diagnosticity model and elaboration likelihood model to show that the effectiveness of eWOM on consumers' perceptions of adopting experience services is contingent on: (1) the stage of the service adoption, (2) consumers' prior experience with the context of the eWOM communications, and (3) the eWOM communications framing (i.e., positive and negative). Our findings explain that the confluence of aforementioned factors determines the effectiveness of eWOM.

Keywords

Electronic Word of Mouth; Adoption Stage; Prior Experience; Controlled Experiment; ANOVA

Introduction

Electronic word of mouth (eWOM) communications are online consumer-generated endorsements and complaints about their experience of using products/services (Mudambi and Schuff 2010). EWOM play an increasingly important role in the popularity and success of services (Benlian et al. 2012). Services can be classified as "search" or "experience" (Mitra et al. 1999; Nelson 1970). Search services are characterized by attributes that can be *objectively* evaluated based on the values attached to their attributes, without the need for the consumers to experience them prior to adoption (Xiao and Benbasat 2007). Examples of search services include a checking bank account (Mitra et al. 1999) or an online ticket for a concert (Hsieh et al. 2005). Unlike search services, experience services are characterized by the attributes that cannot be objectively evaluated, rather need to be *experienced* and *subjectively* evaluated by the consumers prior to adoption (Xiao and Benbasat 2007). Examples of experience services include music (Bhattacharjee et al. 2006) and healthcare (Dranove 2009; Sloan and Kasper 2008). Given that eWOM communications reflect the experiences and opinions of other consumers, they are helpful in evaluating *experience* services in terms of providing a diagnostic reasoning process underlying the service adoption (Fang et al. 2011). Thus, our focus in this paper is on the effectiveness of eWOM on consumers' perceptions of adopting *experience* services (will be referred to as *services*, hereafter, for the brevity purposes).

Extant research findings show that, *ceteris paribus*, eWOM affect consumer perceptions in the pre-usage of services (Barnes and Jacobsen 2014; Cheung and Thadani 2012). Yet, little is known about whether and how eWOM can influence consumers' post-usage perceptions (Cheung and Thadani 2012). Prior research shows that consumers' cognitive processing of a service-related communication changes as a result of their direct exposure to the service (Bone 1995). In other words, consumers' information processing

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approach prior to using the service (pre-usage) can be different from their information-processing approach after using the services (post-usage). Greenwald and Leavitt (1984) identified four levels of consumers' processing of incoming messages about the services (in order from low to high): pre-attention, focal attention, comprehension, and elaboration. The four levels differ in the abstractness of symbolic activity used in the analysis of an incoming message. The progression from pre-attention (the lowest level of cognitive processing) through elaboration (the highest level of processing) is facilitated by the allocation of increasing attentional capacity. Pre-attention uses little cognitive capacity. The second level, focal attention uses modest capacity to decipher the message's sensory content and peripheral cues, such as its brand. Further attentional capacity is required for comprehension, which analyzes the message by constructing a propositional representation of it. The fourth level of processing, elaboration uses still more attentional capacity to integrate the propositional representation of the message content with the consumers' prior experience with the context of the message (i.e., the prior experience with the context of the service). To this end, the *consumers' prior experience with the message context* is an important requirement for the elaboration level of message processing. The elaboration level processes mainly occur in the post-usage stage. As such, drawing on elaboration likelihood model (ELM) (Petty and Wegener 1999), we contend that the effectiveness of eWOM communications in the post-usage is contingent on consumers' level of prior experience with the service context.

The rest of the paper proceeds as follows. First, we describe the theoretical foundation to postulate three hypotheses. Next, the methodology for testing the stated hypotheses is explained. Section four provides the statistical analyses, followed by a discussion and implications for research and practice.

Theoretical Foundations

According to the accessibility-diagnostics model (Feldman and Lynch 1988), a piece of information is used as an input for judgment and choice, only when it is accessible in the user's memory and it is conceived as a more diagnostic information than other alternatives. A piece of information is perceived as diagnostic if it helps the consumer assign a service to one (and only one) cognitive category. Hence, diagnostics refers to the extent to which a given piece of information distinguishes between alternative hypotheses, interpretations, or categorizations of the service. An eWOM communication received by the consumer in the pre-usage stage represents an accessible piece of information about the service that is likely to be perceived as diagnostic, in the absence of consumers' direct usage of that service. To that end, we expect that in the pre-usage stage, *ceteris paribus*, eWOM communications are accessible and diagnostic source of information for consumers to evaluate and decide on possible adoption of a service.

The accessibility-diagnostics model also emphasizes that perceived diagnostics determines the likelihood of information utilization in the post-usage (Hoch and Deighton 1989). However, inferential biases are possible when consumers misconceive the diagnostic value of a given piece of information (e.g., eWOM communication) that in turn can affect their perceptions of adopting a service in the post-usage stage. Furthermore, consumers' prior experience with the context of service represents their knowledge of the pertinent service domain due to its accessibility in the memory (Park et al. 1994; Park and Kim 2008). Drawing on the ELM, we contend that consumer's prior experience with the context of the service moderates the diagnostic value of eWOM in the post-usage stage.

The ELM explains that different processes can lead to perceptions formation in different circumstances (Petty and Wegener 1998). A key construct in the ELM is the elaboration likelihood continuum (Petty and Wegener 1998). On the one hand, when the elaboration likelihood is high, people evaluate the object-relevant information based on their prior experience with the context of the object, which would result in the formation of perceptions about the object that are well articulated and bolstered by their prior experience, referred to as *central route*. On the other hand, when the elaboration likelihood is low, the information scrutiny is significantly reduced and people's perceptions about the focal object are formed as a result of less resource demanding heuristics (a.k.a., "simple evaluative thoughts") that do not require effortful evaluation of the object-relevant information, referred to as *peripheral route* (Petty and Wegener 1998). The ELM posits that as the impact of central route process on the formation of perceptions increases, the impact of peripheral route process decreases (a.k.a., "trade-off hypothesis"). The ELM emphasizes that this trade-off is not in the occurrence of central and peripheral processes, but in the impact of these processes on the formation of people's perceptions about the object (Petty and Wegener

1998). For example, in the post-usage stage, under low elaboration conditions (peripheral route), an eWOM communication from a credible source about a service can invoke simple evaluative thoughts such as “credible sources provide high-quality knowledge” (Meservy et al. 2013), which can be used as the basis for adoption of the service. However, under high elaboration conditions, the eWOM communication from the credible source would be subjected to careful scrutiny in the post-usage stage, just as the attributes of the communicated service are subjected to careful evaluations (central route). If the eWOM communication is found to lack merit for supporting the advocated view, or does not provide much information over and above the consumer's prior experience with the context of the service, then it has little impact on consumer's perceptions about adopting the service. Extrapolating this to the post-usage stage, we contend that under peripheral route conditions, the eWOM communication result in invocation of simple evaluative thoughts for the consumers, which can be used as the basis for their adoption of the service. However, under central route conditions, the attributes of the recommended service as well as the eWOM communications are subjected to careful scrutiny by the consumers, based on their prior experience with the service context (Petty and Wegener 1998). As a result, only the eWOM communications that are found desirable and valid will likely be pursued, which reduces the direct effect of eWOM communications on consumers' perceptions of adopting the services. Based on the above justifications, we propose the following hypotheses:

Hypothesis 1: *the effectiveness of positive/negative eWOM communications on consumers' perceptions of adopting a service in pre-usage stage is not affected by the prior consumers' experience with the context of the service*

Hypothesis 2: *the effectiveness of positive/negative eWOM communications on consumers' perceptions of adopting a service in post-usage stage is low, when consumers have high prior experience with the context of the service.*

Hypothesis 3: *the effectiveness of positive/negative eWOM communications on consumers' perceptions of adopting a service in post-usage stage is high, when consumers have low prior experience with the context of the service.*

Methodology

We devised a laboratory experiment to assess the three stated hypotheses. To that end, we *randomly* assigned 395 students (179 female and 216 male) to six conditions based on a 3×2 between-subject factorial design via a controlled laboratory experiment that involved a two-stage (pre- and post-usage) within-subject data collection, as depicted in Table 1. Three different conditions regarding the eWOM communications (i.e., positive eWOM, negative eWOM, and no-eWOM) in conjunction with two different conditions to represent high/low prior experience with the context of the focal service (representing central/peripheral routes in ELM) were manipulated between subjects. To prevent any bias in our analysis (Tang et al. 2014), the no-eWOM condition for each of high/low prior experience conditions was used as the control condition to provide the baseline data for investigating the effectiveness of eWOM communications on consumers' perceptions of adopting the services. Furthermore, we operationalized the two stages of the online service adoption as a within subjects factor.

Students provide an appropriate sample when the focus is on the controlled theory testing (Calder et al. 1981; Wells et al. 2011). Furthermore, scholars (e.g., Nah et al. 2010; Yin et al. 2014) have relied on student subjects in their service adoption and eWOM studies. Therefore, we deem the students sample appropriate for our study. Students' participation in our study was voluntary and was compensated by a 2% bonus mark.

The laboratory experiment enabled us to have a controlled environment to assess the effect of the prior experience on the effectiveness of eWOM communication in pre and post-usage stages of adopting a service. The potential confounding effects of the other factors (e.g., quality of eWOM communications) were controlled. We used online structured questionnaires to collect pertinent data.

| | Pre-usage | | Post-usage | |
|--|--|--|--|--|
| | <i>High Prior Experience with the Service Context (Online Music)</i> | <i>Low Prior Experience with the Service Context (Online Healthcare)</i> | <i>High Prior Experience with the Service Context (Online Music)</i> | <i>Low Prior Experience with the Service Context (Online Healthcare)</i> |
| Positive eWOM Communications (experimental group) | Experimental Condition | Experimental Condition | Experimental Condition | Experimental Condition |
| Negative eWOM Communications (experimental group) | Experimental Condition | Experimental Condition | Experimental Condition | Experimental Condition |
| No eWOM (control group) | Control Condition | Control Condition | Control Condition | Control Condition |

Table 1. 3x2 Between Subject Controlled Experiment

Experimental Manipulation: High/Low Prior experience of the Service Context

To manipulate the high/low consumers' prior experience of the subjects, we selected two domains of the online service: online music to represent high prior experience and online healthcare to represent low prior experience. Students use their computers and the Internet to listen to their favourite music frequently (Kennedy et al. 2008). Thus, we expect our subjects to *have high prior experience* of selecting their favourite music using music websites. However, considering that our subjects were second-year undergraduate commerce students, we expected them to *have low prior experience* of selecting their desired healthcare topics using healthcare websites. The validity of our experimental manipulation for high/low prior experience of the context was ensured by objectively measuring our subjects' level of prior experience with the music/healthcare websites using the content analysis of the qualitative data obtained from the open-ended questions. To that end, we content analyzed the "cognitive responses" of our subjects. Cognitive responses serve as the basis for evaluating different objects, such as services (Sujan 1985). The presence of central and peripheral route processes, as outlined by the ELM, can be evidenced by examining the type and the number of cognitive responses elicited by our subjects (Sujan 1985). Under the central route conditions for evaluating a service, consumers' cognitive responses should comprise thoughts that reflect specific cognitive operations performed on the information provided about the service attributes, called "attribute-oriented thoughts". Under the peripheral route conditions, consumers' cognitive responses should include thoughts referring to overall impressions and/or evaluations of the service that are not supported by careful evaluation of the service attributes, called "simple evaluative thoughts" (a.k.a., "heuristics").

To that end, subjects' qualitative responses to the open-ended questions were separated into individual thoughts and classified into one of two attribute-oriented thoughts or simple evaluative thoughts, by two independent judges. The inter-judge agreement was 79 percent and the inter-judge reliability was acceptable at 0.85 (Fleiss 1981).

The results of MANOVA tests for the content analysis show that our subjects generated significantly larger number of attribute-oriented thoughts than simple evaluative thoughts in evaluating the music websites ($F = 114.001, p < 0.001$), which is an indication of their higher prior experience. Furthermore, our subjects produced significantly larger number of simple evaluative thoughts than attribute-oriented thoughts in evaluating the healthcare websites ($F = 353.417, p < 0.001$), which is an indication of their lower prior experience. Therefore, our results validate our expectation: our subjects had higher prior experience with the online music context than online healthcare context.

Experimental Manipulation: eWOM Communications

Consistent with the prior eWOM studies (e.g., Park and Kim 2008; Yin et al. 2014), we developed eWOM communications in terms of positive and negative online reviews about the focal healthcare/music websites. After reviewing samples of online reviews about the healthcare/music websites posted on various review websites (e.g., Viewpoints.com, Epinions.com, and Alexa.com), we developed four positive and four negative reviews. Each review dealt with one attribute of the healthcare/music website, namely perceived usefulness of the website, perceived ease of use of the website, trust in the website, and structural assurances of the website. We controlled the level of justifications in each review to avoid any confounding effects caused by the variations in the levels of justifications in the reviews. A pilot study with 20 Ph.D. students confirmed that the eWOM communications were perceived as we intended.

Factors and Measures

Dependent and Controlled Factors

A systematic review of eWOM literature (See Montazemi and Qahri-Saremi 2014) show the significance of five dimensions consisting of 26 factors, as depicted in Table 2. Extant literature contends that these 26 factors affect the effectiveness of eWOM on consumers' perceptions of adopting services. As can be noted, eWOM affects consumers' perceptions of adopting services in terms of five factors: intention to use, perceived usefulness, perceived ease of use, attitude toward using, and trust in the service. Thus, we test the stated hypotheses in terms of these five factors. To improve the internal validity of our experiment, we controlled for the potential confounding effects of the rest of the factors (see Table 2) in testing the stated hypotheses. Due to space limitation, the details of the procedures used for controlling these factors are available from the authors upon request.

| eWOM | | Source | Receiver | Focal Services | Response (Dependent Factors) |
|-----------------------|-------------|-------------|--------------|--------------------|------------------------------|
| Perceived Helpfulness | Sidedness | Credibility | Tie Strength | Service Popularity | Intention to use |
| Perceived Credibility | Orientation | Type | Involvement | Service Type | Perceived Usefulness |
| Confirmation | Consistency | Knowledge | Demographics | Platform Type | Perceived Ease of Use |
| Quality | Emotions | Homophily | | | Attitude Toward Using |
| Volume | Rating | Identity | | | Trust |

Table 2. Factors Affecting eWOM Effectiveness

Measures

All measurement instruments were adapted from the existing and validated scales in the literature and operationalized using 5-point Likert scales (i.e., 1: strongly disagree – 5: strongly agree) in form of online questionnaires. Measures for perceived usefulness, perceived ease of use, and trust were adapted from Pavlou and Fygenson (2006). We conducted a series of preliminary data analyses to ensure the quality of our measurements and the required underlying statistical assumptions for our data analysis. As depicted in Table 3, all our measures have acceptable reliabilities (i.e., > 0.75). Furthermore, results of our preliminary analysis shows that there is no concern with respect to serious deviations from normality assumption in the dependent factors: all the skewness and kurtosis values were within the recommended threshold of [-1,+1] (Meyers et al. 2006) (see Table 3).

| Factor | | Mean (Std. Dev.) | Alpha | Skewness (kurtosis) | 1 | 2 | 3 | 4 |
|-------------------|---------------------------------------|---------------------|-------|------------------------|------|------|------|------|
| <i>Pre-usage</i> | | | | | | | | |
| 1 | Intention to Use (Pre-usage) | 2.57 (1.11) | 0.91 | 0.23 (-1.03) | 1 | | | |
| 2 | Perceived Usefulness (Pre-usage) | 10.32 (5.10) | 0.89 | 0.36 (-0.48) | 0.54 | 1 | | |
| 3 | Perceived Ease of use (Pre-usage) | 11.98 (4.79) | 0.82 | 0.17 (-0.16) | 0.38 | 0.62 | 1 | |
| 4 | Attitude Toward Using (Pre-usage) | 2.90 (0.79) | 0.87 | -0.36 (-0.35) | 0.59 | 0.64 | 0.51 | 1 |
| 5 | Trust (Pre-usage) | 10.52 (4.70) | 0.76 | 0.24 (-0.46) | 0.47 | 0.76 | 0.55 | 0.57 |
| <i>Post-usage</i> | | | | | | | | |
| 1 | Intention to Use (Post-usage) | 3.11 (1.15) | 0.95 | -0.34 (-0.98) | 1 | | | |
| 2 | Perceived Usefulness (Post-usage) | 11.75 (5.09) | 0.89 | 0.02 (-0.39) | 0.67 | 1 | | |
| 3 | Perceived Ease of use (Post-usage) | 14.00 (5.38) | 0.89 | -0.10 (-0.39) | 0.49 | 0.65 | 1 | |
| 4 | Attitude Toward Using (Post-usage) | 3.06 (0.94) | 0.90 | -0.43 (-0.47) | 0.78 | 0.68 | 0.51 | 1 |
| 5 | Trust (Post-usage) | 12.77 (4.65) | 0.79 | 0.07 (-0.10) | 0.47 | 0.72 | 0.63 | 0.49 |

Table 3. Descriptive Statistics and Correlations

Experimental Procedures

The controlled laboratory experiment took place at a computer lab, where subjects were randomly assigned to one of the six conditions (depicted in Table 1). The experiment was conducted as follows.

- 1) We selected eight top online music services and eight top online healthcare services for our experiment based on rankings provided by Alexa.com, which rates the popularity of websites based on their user traffic. This enabled us to avoid bias in terms of variations in the popularity of the offered services. We selected these online services based on a set of criteria to ensure that they had similar functionalities pertinent to our required test environment.
- 2) Subjects were asked to complete an online questionnaire to collect their personal (i.e., name and student number) and demographics information (i.e., age and gender).
- 3) Next, to collect data for the pre-usage stage, a randomly selected website from either a music or a healthcare list of eight websites was displayed on the screen. The subject was prompted to state whether he/she had used the presented website before. If he/she had used the website, then another randomly selected website from that list was presented on the screen. There was no incident in which the subject had already used all of the eight websites in the list.
- 4) Next, subjects were shown four distinct positive eWOM or negative eWOM regarding perceived usefulness, perceived ease of use, and trust of their focal website. This procedure was skipped for the subjects in the control conditions (i.e., no-eWOM condition).
- 5) Next, subjects were asked to complete the online questionnaires regarding their evaluations of intention to use, perceived usefulness, perceived ease of use, attitude toward using, and trust in the focal healthcare/music website. We used these data to test hypothesis 1.
- 6) Next, to collect data for the post-usage stage, subjects were asked to visit the focal healthcare/music website and explore the pertinent material for 15 minutes.

- 7) Next, subjects were asked to complete the online questionnaires to evaluate their intention to use, perceived usefulness, perceived ease of use, attitude toward using, and trust of the focal healthcare/music website. We used these data to test hypotheses 2 and 3.

Results

In the pre-usage stage, the ANOVA tests (see Table 4) show that negative eWOM significantly affect all five factors in both online music and online health contexts (as compared to the control group). Thus, hypothesis 1 is supported for all five factors for negative eWOM condition. Furthermore, positive eWOM for has significant effect on intention to use in both online music and online health contexts (as compared to the control group). As a result, hypothesis 1 can be supported for “intention to use” factor. Nonetheless, our hypothesis 1 is not supported for the effect of positive eWOM on PU, PEOU, ATT, and Trust. These findings show that eWOM valence (i.e. positive/negative), the prior knowledge of the service context, as well as the choice of dependent factor are important in determining the effectiveness of eWOM in the pre-usage stage.

| | | Pre-usage | | | | Post-usage | | | |
|---------------|-------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|---------|
| | | Online Health | | Online Music | | Online Health | | Online Music | |
| | | ANOVA | | ANOVA | | ANOVA | | ANOVA | |
| | | F-Value (df=1) | P-Value | F-Value (df=1) | P-Value | F-Value (df=1) | P-Value | F-Value (df=1) | P-Value |
| Positive eWOM | INT | 19.890 | 0.000 | 12.132 | 0.001 | 1.011 | 0.317 | 0.011 | 0.918 |
| | PU | 18.873 | 0.000 | 0.005 | 0.945 | 3.471 | 0.065 | 0.432 | 0.512 |
| | PEOU | 13.156 | 0.000 | 0.168 | 0.682 | 0.091 | 0.763 | 1.322 | 0.252 |
| | ATT | 11.515 | 0.001 | 0.969 | 0.327 | 0.844 | 0.360 | 0.025 | 0.874 |
| | Trust | 20.756 | 0.000 | 0.645 | 0.423 | 2.571 | 0.111 | 0.830 | 0.364 |
| Negative eWOM | INT | 8.474 | 0.004 | 7.599 | 0.007 | 4.291 | 0.041 | 0.186 | 0.667 |
| | PU | 21.271 | 0.000 | 28.186 | 0.000 | 7.744 | 0.006 | 0.535 | 0.466 |
| | PEOU | 4.189 | 0.043 | 23.492 | 0.000 | 5.841 | 0.017 | 0.087 | 0.768 |
| | ATT | 27.880 | 0.000 | 58.252 | 0.000 | 14.215 | 0.000 | 0.750 | 0.388 |
| | Trust | 14.515 | 0.000 | 15.621 | 0.000 | 8.399 | 0.004 | 0.056 | 0.814 |

Note: Intention to use (INT), Perceived usefulness (PU), Perceived ease of use (PEIU), Attitude towards using (ATT).

Table 4. Summary of ANOVA Hypothesis Testing Results

As postulated in hypothesis 2, in post-usage stage, positive and negative eWOMs did not have significant effects (as compared with the controlled group) on the perceptions of the subjects who were conditioned to the high prior experience with the service context (i.e., online music service) for all five factors. Thus, hypothesis 2 is supported for all five factors.

As postulated in hypothesis 3, in the post-usage stage, the negative eWOM had significant effects (as compared with the controlled group) on the perceptions of the subjects who were conditioned to the low prior experience with the service context (i.e., online healthcare service) for all five factors. In this case, hypothesis 3 is supported for all five factors. However, contrary to hypothesis 3, the positive eWOM did not have a significant effect (as compared with the controlled group) on the perceptions of the subjects who were conditioned to the low prior experience with the service context (i.e., online healthcare service) for any of the five factors in the post-usage stage. Therefore, hypothesis 3 is not supported for the positive eWOM.

Discussions

Our research findings show the importance of the moderating effects of consumers' prior experience with the context of the services and the two stages of service adoption in assessing the effectiveness of positive and negative eWOM communications. In the pre-usage stage, the subjects who received positive/negative eWOM relied mainly on that communication to assess the services. Drawing on accessibility-diagnosticsity

model (Feldman and Lynch 1988), in the absence of consumers' direct experience with the service, eWOM communications represent accessible source of information that is perceived as a reliable diagnostic information for possible services offered. It is noteworthy that our findings show an interesting pattern of eWOM effects in the pre-usage stage. We observe that in the pre-usage stage, when prior knowledge of the context is low, eWOM uniformly affects all the five factors (i.e., individuals' perceptions, attitude, and intention). However, when the prior knowledge of the context is high, the significant effect of eWOM is limited to individuals' intentions to use the service. This finding can be explained in light of eWOM informational and normative mechanisms of influence. Social influence is facilitated via two main influence mechanisms: normative influence and informational influence (Henningesen et al. 2003). Normative influence is exerted by an individual's social referents in an attempt to influence individual's *behavior* in a specific way. Informational influence, by contrast, is based on the desire of the individual to seek out expertise, which can alter individual's *perceptions and attitude* about the object of influence. We contend that in the pre-usage stage, when the prior knowledge of the context is low, the eWOM has informational influence on the consumers, which results in affecting their perceptions, followed by their attitude and intentions. However, when the prior knowledge of the context is high, the eWOM has normative influence on consumers, which results in affecting their behavioral intentions only.

In the post-usage, consumers with high prior experience of the context of eWOM rely on their own opinions more than they rely on the opinions of others (Hoch and Deighton 1989). Consumers with low prior experience of the context seem to disregard the positive eWOM in adopting the service. This could be due to their lack of motivation in adopting services that they have little prior experience with its context (Wood and Swait 2002). However, the negative eWOM does affect the adoption of services for consumers that have low prior experience with the context. Studies in persuasion (e.g., Rippetoe and Rogers 1987) have shown that people assign relatively more weight to information with negative implications than information that has positive implications. Of course, lack of motivation to adopt a service with which they do not have much prior experience could be an added reason to avoid adopting the service.

Implications for Research

Our research contributes to the eWOM literature by shedding light on the confluence (simultaneous influence) of three moderating factors on the effectiveness of eWOM communications: (1) the stage of the service adoption, (2) consumers' prior experience with the context of the eWOM communications, and (3) the eWOM communications framing (i.e., positive and negative). Our findings also show that the effects of these factors are not always symmetric, meaning that some specific conditions with respect to these factors can lead to very strong effectiveness of eWOM communications regardless of other factors. For example, eWOM communications were significantly effective source of information for assessing services in the pre-usage stage, regardless of their framing and consumers' prior experience with the service context. However, in the post-usage stage, the whole pattern changed as the effectiveness of eWOM communications was largely dependent on other two factors, namely the eWOM communications framing and consumers' prior experience with the context. These results are suggestive of the complexity of assessing the effectiveness of eWOM communications on the formation of perceptions toward adoption of focal services. Most of the extant studies in the eWOM literature have focused on separate pertinent factors without considering the possibility of confluence and interaction effects among them (Cheung and Thadani 2012). Notwithstanding the contributions of such studies, we believe that unravelling the nature of such confluence can be a promising avenue for future research in this area. For example, we need to better understand the confluence of consumers' motivation and prior experience of the context on the effectiveness of eWOM communications. Prior studies (e.g., Wood and Swait 2002) show that consumers' propensities to adopt services play an important role in consumers' behaviour, in terms of increasing their motivation to evaluate and seek information about the services.

Moreover, in this study, we focused on three experimental and control conditions for eWOM communications: all positive eWOM communications, all negative eWOM communications, or no-eWOM. Such an experimental design was necessary for the purpose of our study, as a controlled experimental research, to prevent any undesirable bias (Tang et al. 2014). However, it is noteworthy that consumers may receive/view both positive and negative eWOM communications regarding a specific

service. Therefore, an extension of our research is the assessment of the effectiveness of eWOM when it contains two-sided (both positive and negative) communications pertaining to a service.

Implications for Practice

Service providers are increasingly seeking ways to explicitly manage eWOM communications with a view to influencing consumer behaviour (Benlian et al. 2012). EWOM marketing involves the seeding of products to targeted groups of consumers with the goal of encouraging them to spread positive eWOM communications, which, in turn, increases brand awareness and sales (Coulter and Roggeveen 2012; Li et al. 2012). However, positive eWOM communications may not be effective in enticing experienced consumers to adopt the services. Furthermore, service providers should ensure that a responsive system for addressing consumers' complaints is in place to avoid negative eWOM communications. When dissatisfied consumers find it difficult to complain to the firm, they disparage the firm to others (Gelb and Johnson 1995). Disparagement of the firm is most likely, when no redress is expected from complaining directly to the firm (Gelb and Johnson 1995).

References

- Barnes, N.G., and Jacobsen, S.L. 2014. "Missed Ewom Opportunities: A Cross-Sector Analysis of Online Monitoring Behavior," *Journal of Marketing Communications* (20:1-2), pp. 147-158.
- Benlian, A., Titah, R., and Hess, T. 2012. "Differential Effects of Provider Recommendations and Consumer Reviews in E-Commerce Transactions: An Experimental Study," *Journal of Management Information Systems* (29:1), pp. 237-272.
- Bhattacharjee, S., Gopal, R.D., Lertwachara, K., and Marsden, J.R. 2006. "Consumer Search and Retailer Strategies in the Presence of Online Music Sharing," *Journal of Management Information Systems* (23:1), pp. 129-159.
- Bone, P.F. 1995. "Word-of-Mouth Effects on Short-Term and Long-Term Product Judgments," *Journal of Business Research* (32:3), pp. 213-223.
- Calder, B.J., Phillips, L.W., and Tybout, A.M. 1981. "Designing Research for Application," *Journal of Consumer Research* (8:2), pp. 197-207.
- Cheung, C.M.K., and Thadani, D.R. 2012. "The Impact of Electronic Word-of-Mouth Communication: A Literature Analysis and Integrative Model," *Decision Support Systems* (54:1), pp. 461-470.
- Coulter, K.S., and Roggeveen, A. 2012. "'Like It or Not': Consumer Responses to Word-of-Mouth Communication in on-Line Social Networks," *Management Research Review* (35:9), pp. 878-899.
- Dranove, D. 2009. *The Economic Evolution of American Health Care: From Marcus Welby to Managed Care*, (1 ed.). Princeton University Press.
- Fang, C.-H., Lin, T.M., Liu, F., and Lin, Y.H. 2011. "Product Type and Word of Mouth: A Dyadic Perspective," *Journal of Research in Interactive Marketing* (5:2/3), pp. 189-202.
- Feldman, J.M., and Lynch, J.G. 1988. "Self-Generated Validity and Other Effects of Measurement on Belief, Attitude, Intention, and Behavior," *Journal of Applied Psychology* (73:3), p. 421.
- Fleiss, J.L. 1981. *Statistical Methods for Rates and Proportions*, (2nd ed.). New York: Wiley.
- Gelb, B., and Johnson, M. 1995. "Word-of-Mouth Communication: Causes and Consequences," *Journal of Health Care Marketing* (15:3), pp. 54-58.
- Greenwald, A.G., and Leavitt, C. 1984. "Audience Involvement in Advertising: Four Levels," *Journal of Consumer research* (11:1), pp. 581-592.
- Henningsen, M.L.M., Henningsen, D.D., Cruz, M.G., and Morrill, J. 2003. "Social Influence in Groups: A Comparative Application of Relational Framing Theory and the Elaboration Likelihood Model of Persuasion," *Communication Monographs* (70:3), pp. 175-197.
- Hoch, S.J., and Deighton, J. 1989. "Managing What Consumers Learn from Experience," *Journal of Marketing* (53:2), pp. 1-20.
- Hsieh, Y.-C., Chiu, H.-C., and Chiang, M.-Y. 2005. "Maintaining a Committed Online Customer: A Study across Search-Experience-Credence Products," *Journal of Retailing* (81:1), pp. 75-82.
- Kennedy, G.E., Judd, T.S., Churchward, A., Gray, K., and Krause, K. 2008. "First Year Students' Experiences with Technology: Are They Really Digital Natives," *Australasian Journal of Educational Technology* (24:1), pp. 108-122.

- Li, Y.-M., Lee, Y.-L., and Lien, N.-J. 2012. "Online Social Advertising Via Influential Endorsers," *International Journal of Electronic Commerce* (16:3), pp. 119-154.
- Meservy, T.O., Jensen, M.L., and Fadel, K.J. 2013. "Evaluation of Competing Candidate Solutions in Electronic Networks of Practice," *Information Systems Research* (25:1), pp. 15-34.
- Meyers, L.S., Gamst, G., and Guarino, A.J. 2006. *Applied Multivariate Research: Design and Interpretation*. Thousand Oaks, CA.: Sage Publications, Inc.
- Mitra, K., Reiss, M.C., and Capella, L.M. 1999. "An Examination of Perceived Risk, Information Search and Behavioral Intentions in Search, Experience and Credence Services," *The Journal of Services Marketing* (13:3), pp. 208-228.
- Montazemi, A.R., and Qahri-Saremi, H. 2014. "The Effectiveness of Electronic Word of Mouth on Consumers' Perceptions of Adopting Products/Services – a Literature Review," in: *10th International Conference on Web Information Systems and Technologies (WEBIST 2014)*. Barcelona, Spain: pp. 324-331.
- Mudambi, S.M., and Schuff, D. 2010. "What Makes a Helpful Online Review? A Study of Customer Reviews on Amazon. Com," *MIS Quarterly* (34:1), pp. 185-200.
- Nah, F.F.-H., Hong, W., Chen, L., and Lee, H.-H. 2010. "Information Search Patterns in E-Commerce Product Comparison Services," *Journal of Database Management (JDM)* (21:2), pp. 26-40.
- Nelson, P. 1970. "Information and Consumer Behavior," *The Journal of Political Economy* (78:2), pp. 311-329.
- Park, C.W., Mothersbaugh, D.L., and Feick, L. 1994. "Consumer Knowledge Assessment," *Journal of Consumer Research* (21), pp. 71-82.
- Park, D.H., and Kim, S. 2008. "The Effects of Consumer Knowledge on Message Processing of Electronic Word-of-Mouth Via Online Consumer Reviews," *Electronic Commerce Research and Applications* (7:4), pp. 399-410.
- Pavlou, P.A., and Fygenson, M. 2006. "Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory of Planned Behavior," *MIS Quarterly* (30:1), pp. 115-143.
- Petty, R.E., and Wegener, D.T. 1998. "Attitude Change: Multiple Roles for Persuasion Variables," in *The Handbook of Social Psychology*, D. Gilbert, S. Fiske and G. Lindzey (eds.). New York, NY: New York: McGraw-Hill, pp. 323-390.
- Petty, R.E., and Wegener, D.T. 1999. "The Elaboration Likelihood Model: Current Status and Controversies," in *Dual-Process Theories in Social Psychology*, S. Chaiken and Y. Trope (eds.). New York, USA: The Guilford Press.
- Rippetoe, P.A., and Rogers, R.W. 1987. "Effects of Components of Protection-Motivation Theory on Adaptive and Maladaptive Coping with a Health Threat," *Journal of personality and social psychology* (52:3), p. 596.
- Sloan, F.A., and Kasper, H. 2008. *Incentives and Choice in Health Care*, (1 ed.). The MIT Press.
- Sujan, M. 1985. "Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgments," *Journal of Consumer Research*, pp. 31-46.
- Tang, T., Fang, E., and Wang, F. 2014. "Is Neutral Really Neutral? The Effects of Neutral User-Generated Content on Product Sales," *Journal of Marketing* (78:4), pp. 41-58.
- Wells, J.D., Valacich, J.S., and Hess, T.J. 2011. "What Signals Are You Sending? How Website Quality Influences Perceptions of Product Quality and Purchase Intentions," *MIS Quarterly* (35:2), pp. 373-396.
- Wood, S.L., and Swait, J. 2002. "Psychological Indicators of Innovation Adoption: Cross-Classification Based Need for Cognition and Need for Change," *Journal of Consumer Psychology* (12:1), pp. 1-13.
- Xiao, B., and Benbasat, I. 2007. "E-Commerce Product Recommendation Agents: Use, Characteristics, and Impact," *MIS Quarterly* (31:1), pp. 137-209.
- Yin, D., Bond, S., and Zhang, H. 2014. "Anxious or Angry? Effects of Discrete Emotions on the Perceived Helpfulness of Online Reviews," *MIS Quarterly* (38:2), pp. 539-560.